

SECTION 00862

PAVEMENT MARKING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish and install waterborne acrylic pavement marking paint.
- B. Furnish and install durable pavement marking materials.
- C. Furnish and install warranted durable pavement marking materials.
- D. Furnish and install pavement messages
- E. Apply to asphaltic or concrete pavement as edge lines, centerlines, broken lines, guidelines, symbols and other related markings.
- F. Remove pavement markings.

1.2 RELATED SECTIONS

- A. Section 01554: Traffic Control
- B. Section 00860: Pavement Marking Paint
- C. Section 00861: Glass Spherical Beads for Waterborne Paint
- D. Section 02768P: Pavement Marking Materials

1.3 REFERENCES

- A. ASTM D 476: Standard Classification for Dry Pigmentary Titanium Dioxide Products
- B. ASTM D 522: Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- C. ASTM D 562: Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer.

- D. ASTM D 711: Standard Test Method for No-Pick-Up Time of Traffic Paint
- E. ASTM D 968: Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive.
- F. ASTM D 969: Standard Test Method for Laboratory Determination of Degree of Bleeding of Traffic Paint
- G. ASTM D 1729: Standard Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials
- H. ASTM D 1475: Standard Test Method for Density of Liquid Coatings, Inks, and Related Products.
- I. ASTM D 2369: Standard Test Method for Volatile Content of Coatings
- J. ASTM D 2371: Standard Test Method for Pigment Content of Solvent-Reducible Paints
- K. ASTM D 2805: Standard Test Method for Hiding Power of Paints by Reflectometry
- L. ASTM E 1347: Standard Test Method for Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry
- M. Federal Supply Standards

1.4 ACCEPTANCE

- A. Department:
 - 1. May randomly sample pavement marking paint and messages.
 - 2. Verifies bead adhesion and dimensional compliance. Verifies compliant bead and paint application daily during production.
 - 3. Verifies quantities measuring both paint and bead tanks prior to and after applications. Measures installed tape and pavement messages.

PART 2 PRODUCTS

2.1 PAVEMENT MARKING MATERIAL

- A. Waterborne Paint. Meet Section 02865P.
- B. Durable pavement Markings. Meet Section 02868P

- C. Spherical Glass Beads. Meet Section 02866P.
- D. Federal Standard 595a, color sample 33538

PART 3 EXECUTION

3.1 PREPARATION

- A. Mobilization:
 - 1. Preparatory work and operations necessary for moving personnel, equipment, supplies and incidentals to the project site before beginning work. No separate payment for mobilization.
- B. Line control
 - 1. Establish control points at 100 ft intervals on tangent and at 50 ft intervals on curves.
 - 2. Maintain the line within 2 inches of the established control points and mark the roadway between control points as needed.
 - a. Remove and replace paint not placed two inches of control points or lines.
- C. Pavement Message Control
 - 1. Establish location for messages
 - 2. Finished message is centered in lane and is less than six inches from longitudinal location

3.2 SPECIFIC WORK REQUIREMENTS

- A. Submit striping and marking plan quarterly that contains
 - 1. Work area identified by route, milepost and road segment.
 - 2. Proposed striping or marking materials.
- B. Submit "Traffic Control Plan" for approval prior to beginning work. Traffic control plan complies with Manual on Uniform Traffic Control Devices (MUTCD) and UDOT Standard Specifications for Road Bridge Construction 2004 Edition.
- C. Furnish, place, maintain and remove all traffic control signs and devices. Payment is included in unit bid price for removal of pavement markings, messages and highway traffic striping
- D. Do not work in the direction of rush hour traffic during peak commute times. Region Traffic Engineer determines restricted hours on an individual basis. Work at night as directed by the Region Traffic Engineer.

- E. Remove pavement markings at the same time new markings are applied.
- F. Contractor receives 24-hour notice prior to specific work location and time.

3.3 APPLICATION

- A. Acrylic waterborne pavement marking paint: Apply at the following rates
 1. Four-inch solid line: from 190 to 240 ft/gal.
 2. Four-inch broken line: from 920 to 960 ft/gal.
 3. Eight-inch solid line: from 95 to 120 ft/gal.
- B. Replace pavement markings that are less than 20 wet mils thick.
- C. Remove pavement markings placed in excess of 23 wet mils thick.
- D. Painted messages and symbols one gallon per 80 square feet.
- G. Glass spherical beads: apply a minimum of 8 lbs/gal of paint, the full length and width of line and pavement markings.
- H. Conduct surface preparations in accordance with manufacturer's recommendations.
- I. Begin striping operations no later than 72 hours after receiving written order.
- J. Apply acrylic waterborne paint when pavement and air temperature is 50 degrees F. and rising.
- K. Comply with Traffic Control Drawing TC Series standard drawings

3.4 CONTRACTOR QUALITY CONTROL

- A. Report paint and bead tank volumes prior to and after applications.
- B. Repaint any line or symbol failing to meet bead adherence and dimensional requirements.
- C. Repaint any line or symbol not complying with minimum application rates for paint or beads.
- D. Provide certified lab reports for materials used in the work prior to placing the products on the roadway.

3.5 REMOVE PAVEMENT MARKINGS

- A. Removal methods:
 - 1. Grinding.
 - 2. High pressure water spray.
 - 3. Sand blasting.
 - 4. Soda blasting.
- B. Use equipment specifically designed for pavement marking material removal.
- C. Sweep and dispose of removed materials left on roadway surface

3.6 PREPARATION

- A. Conduct surface preparations in accordance with manufacturer's recommendations.

3.7 INSTALLATION

- A. Install pavement markings and messages per ST Series standard drawings.

END OF SECTION

Imported Region FY2004 Pavement Marking Installation specification – June 23, 2004
Extensively modified text to reflect maintenance painting operations, quality assurance, and time requirements – June 23, 2004
Deleted Section Paint Specification – June 23, 2004
Added Section 2.3 Other UDOT-Accepted Systems – June 23, 2004